

**Determine whether the given value is a statistic or a parameter.**

- 1) After inspecting all of 55,000 kg of meat stored at the Wurst Sausage Company, it was found that 45,000 kg of the meat was spoiled.

**Identify the number as either continuous or discrete.**

- 2) The average height of all 32 basil plants 3 weeks after germination is 3.4 centimeters.

**Identify the TWO types of sampling are used: simple random, stratified, systematic, cluster, convenience.**

- 3) A market reasearcher randomly selects 10 gracery stores in California and then interviews selects every 100th person that walks into the store.

**Provide an appropriate response.**

- 4) A researcher obtains an alphabetical list of the 2560 students at a college. She uses a random number generator to obtain 50 numbers between 1 and 2560. She chooses the 50 students corresponding to those numbers. Does this sampling plan result in a random sample? Simple random sample? Explain.
- 5) A hip hop radio show broadcast in the city of Puddelton asked people to call in and express their opinions on the new mayor. Are the results likely to be representative of all adults in Puddelton? Of all listeners to the hip hop show? Why or why not?

**Solve the problem.**

- 6) The following frequency distribution analyzes the scores on a math test.

Draw the corresponding histogram.

Scores	Frequency
31-45	2
46-60	4
61-75	6
76-90	15
91-105	8

The class width \_\_\_\_\_

The class boundaries of scores interval 46-60 \_\_\_\_\_

The class midpoint of scores interval 46-60 \_\_\_\_\_

Is the data approximately Normal? \_\_\_\_\_ Why?

**Provide an appropriate response.**

- 7) A researcher wishes to assess the working conditions of farm workers at farms in his district. There are 37 farms in the district which are widely scattered geographically. The researcher wishes to interview at least 300 farm workers. Each farm employs approximately 50 workers.

a) Describe a method for selecting a sample which involves **cluster** sampling.

b) What group is the sample?

c) What is the population?

d) Is this sample representative? Explain.

e) The researcher will ask "How many hours each worker works per week?" Is the number of hours worked a quantitative or qualitative variable? Would you use a mean or a proportion as a summary statistic?

f) The researcher will ask "Is the farm safe?" Is opinion of working safety a quantitative or qualitative variable? Would you use a mean or a proportion as a summary statistic?